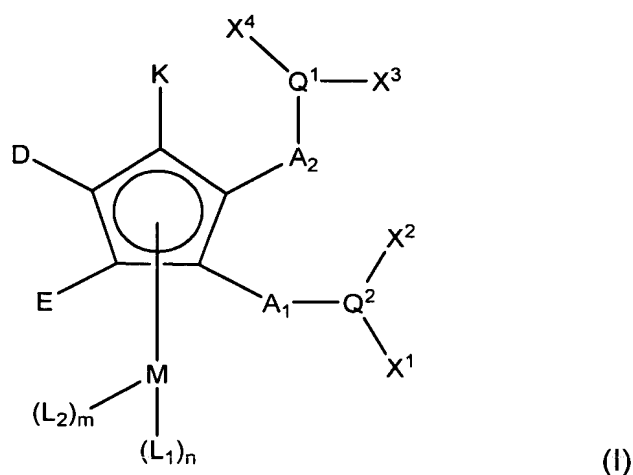


Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1. (Currently Amended) A compound obtainable by combining:
 - (a) a Group VIIIB metal or a compound thereof; and,
 - (b) a compound of formula I or salt thereof:



wherein:

A₁ and A₂, and A₃, A₄ and A₅ (when present), each independently represent lower alkylene;

K is selected from the group consisting of hydrogen, lower alkyl, aryl, Het, halo, cyano, nitro, -OR¹⁹, -OC(O)R²⁰, -C(O)R²¹, -C(O)OR²², -N(R²³)R²⁴, -C(O)N(R²⁵)R²⁶, -C(S)(R²⁷)R²⁸, -SR²⁹, -C(O)SR³⁰, -CF₃ or -A₃-Q³(X⁵)X⁶;

D is selected from the group consisting of hydrogen, lower alkyl, aryl, Het, halo, cyano, nitro, -OR¹⁹, -OC(O)R²⁰, -C(O)R²¹, -C(O)OR²², -N(R²³)R²⁴, -C(O)N(R²⁵)R²⁶, -C(S)(R²⁷)R²⁸, -SR²⁹, -C(O)SR³⁰, -CF₃ or A₄-Q⁴(X⁷)X⁸;

E is selected from the group consisting of hydrogen, lower alkyl, aryl, Het, halo, cyano, nitro, -OR¹⁹, -OC(O)R²⁰, -C(O)R²¹, -C(O)OR²², -N(R²³)R²⁴, -C(O)N(R²⁵)R²⁶, -C(S)(R²⁷)R²⁸, -SR²⁹, -C(O)SR³⁰, -CF₃ or -A₅-Q⁵(X⁹)X¹⁰;

or both D and E together with the carbon atoms of the cyclopentadienyl ring to which they are attached form an optionally substituted phenyl ring:

X^1 represents $CR^1(R^2)(R^3)$, congressyl or adamantyl, X^2 represents $CR^4(R^5)(R^6)$, congressyl or adamantyl, or X^1 and X^2 together with Q^2 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^1 and X^2 together with Q^2 to which they are attached form a ring system of formula Ia;

X^3 represents $CR^7(R^8)(R^9)$, congressyl or adamantyl, X^4 represents $CR^{10}(R^{11})(R^{12})$, congressyl or adamantyl, or X^3 and X^4 together with Q^1 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^3 and X^4 together with Q^1 to which they are attached form a ring system of formula Ib;

X^5 represents $CR^{13}(R^{14})(R^{15})$, congressyl or adamantyl, X^6 represents $CR^{16}(R^{17})(R^{18})$, congressyl or adamantyl, or X^5 and X^6 together with Q^3 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^5 and X^6 together with Q^3 to which they are attached form a ring system of formula Ic;

X^7 represents $CR^{31}(R^{32})(R^{33})$, congressyl or adamantyl, X^8 represents $CR^{34}(R^{35})(R^{36})$, congressyl or adamantyl, or X^7 and X^8 together with Q^4 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^7 and X^8 together with Q^4 to which they are attached form a ring system of formula 1d;

X^9 represents $CR^{37}(R^{38})(R^{39})$, congressyl or adamantyl, X^{10} represents $CR^{40}(R^{41})(R^{42})$, congressyl or adamantyl, or X^9 and X^{10} together with Q^5 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^9 and X^{10} together with Q^5 to which they are attached form a ring system of formula 1e;
 Q^1 and Q^2 , and Q^3 , Q^4 and Q^5 (when present), each independently represent phosphorus, arsenic or antimony;

M represents a Group ~~VIB~~ or VIIIB metal or metal cation thereof;

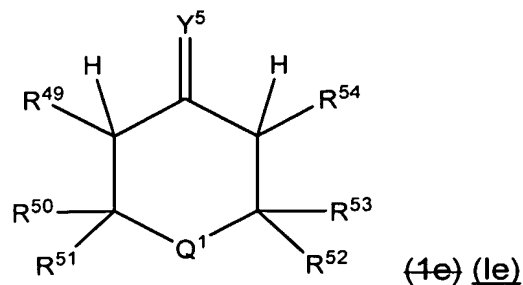
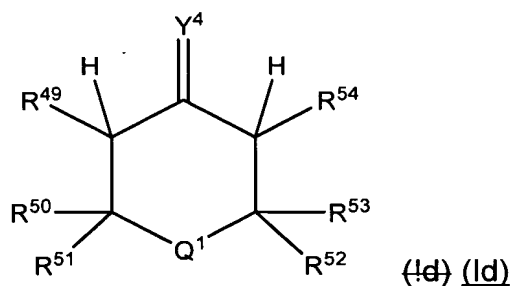
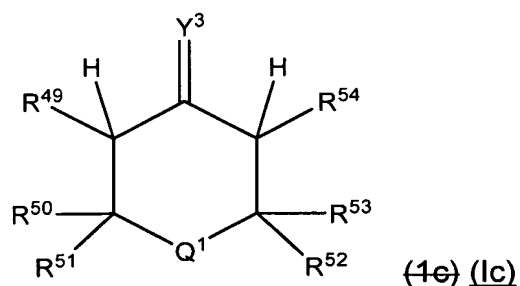
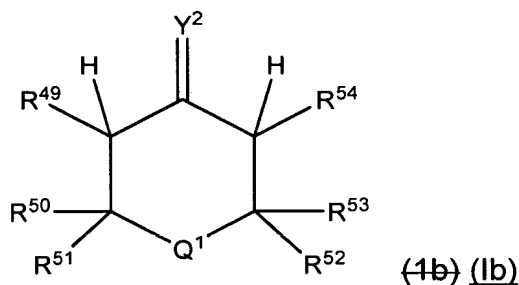
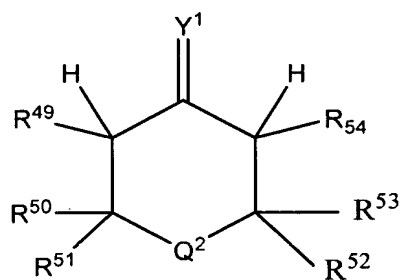
L_1 represents an optionally substituted cyclopentadienyl, indenyl or aryl group;

L₂ represents one or more ligands each of which are independently selected from hydrogen, lower alkyl, alkylaryl, halo, CO, P (R⁴³)(R⁴⁴)R⁴⁵ or N(R⁴⁶)(R⁴⁷)R⁴⁸ ;

R¹ to R¹⁸ and R³¹ to R⁴², when present, each independently represent hydrogen, lower alkyl, aryl, halo or Het;

R¹⁹ to R³⁰ and R⁴³ to R⁴⁸, when present, each independently represent hydrogen, lower alkyl, aryl or Het;

the ring systems of formula ~~1a, 1b, 1c, 1d~~ 1a, 1b, 1c, 1d and 1e are represented by the formulae



R⁴⁹, R⁵⁴ and R⁵⁵, each independently represent hydrogen, lower alkyl or aryl; R⁵⁰ to R⁵³ each independently represent hydrogen, lower alkyl, aryl or Het; and Y¹, Y², Y³, Y⁴ and Y⁵, each independently represent oxygen, sulfur or N-R⁵⁵ ;

$n = 0$ or 1 ;

and $m = 0$ to 5 ;

provided that when $n = 1$ then m equals 0 , and when n equals 0 then m does not equal 0 .

2. (Original) A compound as claimed in claim 1, wherein if both K represents $-A_3-Q^3(X^5)X^6$ and E represents $-A_5-Q^5(X^9)X^{10}$, then D represents $-A_4-Q^4(X^7)X^8$.

3. (Previously Presented) A compound as claimed in claim 1, wherein R^1 to R^{18} and R^{31} to R^{42} each independently represent hydrogen, optionally substituted C_1 - C_6 alkyl or optionally substituted phenyl.

4. (Previously Presented) A compound as claimed in claim 1, wherein R^1 to R^{18} and R^{31} to R^{42} each independently represent hydrogen or non-substituted C_1 - C_6 alkyl.

5. (Previously presented) A compound as claimed in claim 1, wherein one or more of the groups R^1 to R^3 , R^4 to R^6 , R^7 to R^9 , R^{10} to R^{12} , R^{13} to R^{15} , R^{16} to R^{18} , R^{31} to R^{33} , R^{34} to R^{36} , R^{37} to R^{39} , R^{40} to R^{42} together with the carbon atom to which they are attached each independently form a cyclic alkyl structure.

6. (Previously Presented) A compound as claimed in claim 1, wherein one or more of the groups R^1 and R^2 , R^4 and R^5 , R^7 and R^8 , R^{10} and R^{11} , R^{13} and R^{14} , R^{16} and R^{17} , R^{31} and R^{32} , R^{34} and R^{35} , R^{37} and R^{38} , R^{40} and R^{41} together with the carbon atom to which they are attached each independently form a cyclic alkyl structure.

7. (Previously Presented) A compound as claimed in claim 1, wherein each of R^1 to R^{18} and R^{31} to R^{42} does not represent hydrogen.

8. (Previously Presented) A compound as claimed in claim 1, wherein adamantyl represents unsubstituted adamantyl or adamantyl substituted with one or more unsubstituted C₁-C₈ alkyl substituents, or a combination thereof.
9. (Previously Presented) A compound as claimed in claim 1, wherein 2-phospha-adamantyl represents unsubstituted 2-phospha-adamantyl or 2-phospha-adamantyl substituted with one or more unsubstituted C₁-C₈ alkyl substituents, or a combination thereof.
10. (Previously Presented) A compound as claimed in claim 1, wherein 2-phospha-adamantyl includes one or more oxygen atoms in the 2-phospha-adamantyl skeleton.
11. (Previously Presented) A compound as claimed in claim 1, wherein congressyl represents unsubstituted congressyl.
12. (Previously Presented) A compound as claimed in claim 1, wherein R⁵⁰ to R⁵³ each independently represent optionally substituted C₁-C₆ alkyl, trifluoromethyl or phenyl optionally substituted with non-substituted C₁-C₆ alkyl or OR¹⁹ where R¹⁹ represents non-substituted C₁-C₆ alkyl.
13. (Previously Presented) A compound as claimed in claim 1, wherein R⁴⁹ and R⁵⁴ each independently represent hydrogen or non-substituted C₁-C₆ alkyl.
14. (Previously Presented) A compound as claimed in claim 1, wherein each of Y¹ to Y⁵ represents oxygen.
15. (Previously Presented) A compound as claimed in claim 1, wherein X¹ is identical to X³, and X⁵, X⁷ and X⁹ when present.
16. (Previously Presented) A compound as claimed in claim 1, wherein X² is identical to X⁴, and X⁶, X⁸ and X¹⁰ when present.

17. (Previously Presented) A compound as claimed in claim 1, wherein X^1 represents $CR^1(R^2)(R^3)$, X^2 represents $CR^4(R^5)(R^6)$, X^3 represents $CR^7(R^8)(R^9)$ and X^4 represents $CR^{10}(R^{11})(R^{12})$.

18. (Previously Presented) A compound as claimed in claim 1, wherein X^1 represents $CR^1(R^2)(R^3)$, X^2 represents adamantyl, X^3 represents $CR^7(R^8)(R^9)$ and X^4 represents adamantyl.

19. (Previously Presented) A compound as claimed in claim 1, wherein X^1 represents $CR^1(R^2)(R^3)$, X^2 represents congressyl, X^3 represents $CR^7(R^8)(R^9)$ and X^4 represents congressyl.

20. (Previously Presented) A compound as claimed in claim 1, wherein X^1 to X^4 each independently represent adamantyl.

21. (Previously Presented) A compound as claimed in claim 1, wherein X^1 to X^4 each independently represent congressyl.

22. (Previously Presented) A compound as claimed in claim 1, wherein X^1 and X^2 together with Q^2 to which they are attached form a ring system of formula Ia, and X^3 and X^4 together with Q^1 to which they are attached form a ring system of formula Ib.

23. (Currently Amended) A compound as claimed in claim 1, wherein X^1 and X^2 together with Q^2 to which they are attached form a 2-phospha-adamantyl group, and X^3 and X^4 together with Q^1 to which they are attached form a 2-phospha-adamantyl group.

24. (Previously Presented) A compound as claimed in claim 1, wherein K represents hydrogen.

25. (Previously Presented) A compound as claimed in claim 1, wherein K represents $-A_3-Q^3(X^5)X^6$.

26. (Original) A compound as claimed in claim 25, wherein $-A_3-Q^3(X^5)X^6$ is identical to $-A_2-Q^1(X^3)X^4$.

27. (Previously Presented) A compound as claimed in claim 1, wherein D and E together with the carbon atoms of the cyclopentadienyl ring to which they are attached form an unsubstituted phenyl ring.

28. (Previously Presented) A compound as claimed in claim 1, wherein D and E both represent hydrogen.

29. (Previously Presented) A compound as claimed in claim 1, wherein D represents $-A_4-Q^4(X^7)X^8$.

30. (Original) A compound as claimed in claim 29, wherein $-A_4-Q^4(X^7)X^8$ is identical to $-A_2-Q^1(X^3)X^4$.

31. (Previously Presented) A compound as claimed in claim 29, wherein E represents hydrogen.

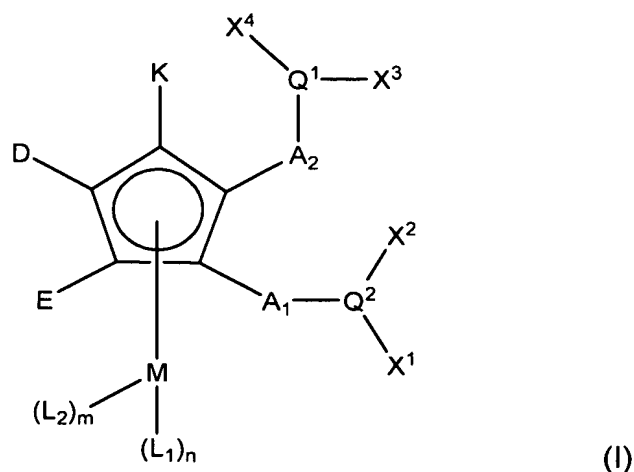
32. (Previously Presented) A compound as claimed in claim 1, wherein E represents $-A_5-Q^5(X^9)X^{10}$.

33. (Original) A compound as claimed in claim 32, wherein $-A_5-Q^5(X^9)X^{10}$ is identical to $-A_2-Q^1(X^3)X^4$.

34. (Previously Presented) A compound as claimed in claim 1, wherein A_1 and A_2 , and A_3 , A_4 and A_5 when present, each independently represent $-CH_2-$ or $-C_2H_4-$.

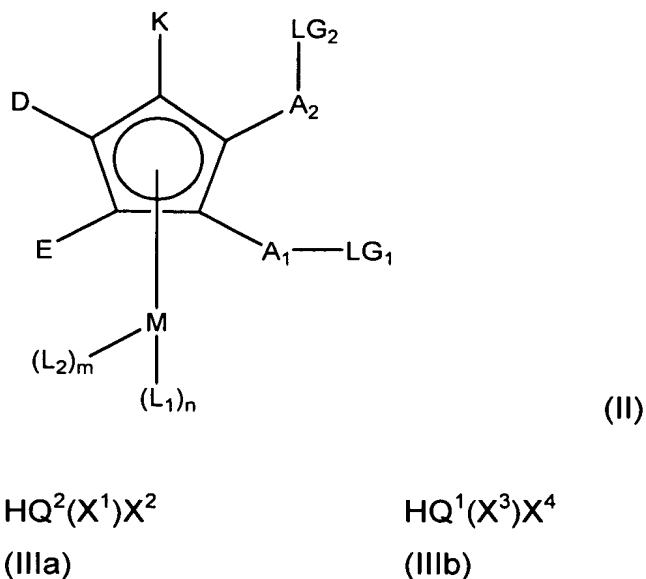
35. (Previously Presented) A compound as claimed in claim 1, wherein each A_1 and A_2 , and A_3 , A_4 and A_5 when present are identical and preferably represent $-CH_2-$.

36. (Previously Presented) A compound as claimed in claim 1, wherein each Q^1 and Q^2 , and Q^3 , Q^4 and Q^5 when present are identical and preferably represent phosphorous.
37. (Previously Presented) A compound as claimed in claim 1, wherein $n=1$, $m=0$ and L_1 is selected from cyclopentadienyl, phenyl, indenyl or naphthyl, preferably unsubstituted cyclopentadienyl.
38. (Previously Presented) A compound as claimed in claim 1, wherein M represents iron or a metal cation thereof.
39. (Previously Presented) A compound as claimed in claim 1 obtainable by combining: (a) palladium or a compound thereof; and (b) a compound of formula I as defined in claim 1.
40. (Previously Presented) A process for preparing a compound as defined in claim 1 comprising combining (a) a Group VIIIB metal or compound thereof; and, (b) a compound of formula I as defined in claim 1.
41. (Previously Presented) A compound of formula I



wherein A_1 , A_2 , K, D, E, M, L_2 , L_1 , Q^1 , Q^2 , X^1 , X^2 , X^3 , X^4 , n and m are as defined in claim 1.

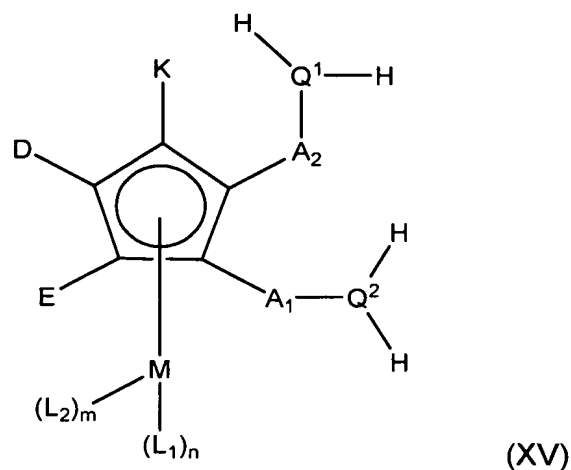
42. (Previously Presented) A process for preparing a compound of formula I as defined in claim 41, comprising reacting a compound of formula II wherein A_1 , A_2 , K , D , E , M , L_1 , L_2 , n and m are as defined for a compound of formula I, and LG_1 and LG_2 represent suitable leaving groups, with a compound of formula IIIa and IIIb



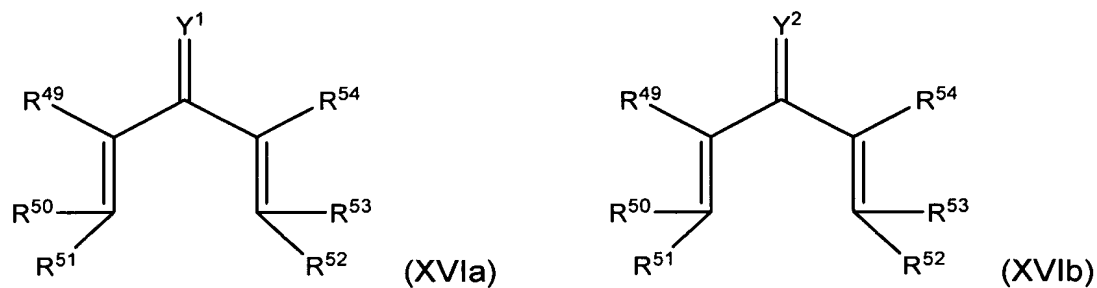
wherein X^1 , X^2 , Q^2 , X^3 , X^4 and Q^1 are as defined in claim 1.

43. (Original) A compound of formula II as defined in claim 42.

44. (Previously Presented) A process for preparing a compound of formula I wherein K , D , E , M , A_2 , A_1 , L_2 , L_1 , Q^1 , Q^2 , m and n are as defined in claim 1 and X^1 and X^2 together with Q^2 to which they are attached form a ring system of formula Ia as defined in claim 1 and X^3 and X^4 together with Q^1 to which they are attached form a ring system of formula Ib as defined in claim 1, comprising reacting a compound of formula XV



wherein K, D, E, M, A₂, A₁, L₂, L₁, Q¹, Q², m and n are as defined in claim 1, with a compound of formula XVIa and XVIb



wherein Y¹, Y², R⁴⁹ to R⁵⁵ are as defined for a compound of formula I.

45. (Original) A compound of formula XV as defined in claim 44.

46. (Previously Presented) A process for the carbonylation of an ethylenically unsaturated compound comprising contacting an ethylenically unsaturated compound with carbon monoxide and a co-reactant in the presence of a compound as defined in claim 1.

47. (Original) A process as defined in claim 46 wherein the co-reactant includes a hydroxyl group containing compound.

48. (Previously Presented) A process as claimed in claim 46, wherein the ethylenically unsaturated compound comprises ethylene, 1, 3-butadiene, oct-1-ene or vinyl acetate, preferably ethylene.

49. (Currently Amended) A process as claimed in ~~any one of claims~~ claim 46, further including the step of including a source of anions.

50. (Previously Presented) A composition comprising a compound as defined in claim 1 attached to a support.

51. (Currently Amended) ~~Use of a compound as defined in claim 1 or a composition as defined in claim 50 as a catalyst.~~ A catalyst comprising a compound according to claim 1.

52. (New) A catalyst comprising a composition according to claim 50.